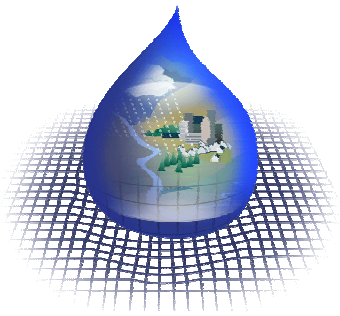
Water Quality Analysis Simulation Program (WASP7.3) Workshop



WASP7 is an enhanced Windows version of the USEPA Water Quality Analysis Simulation Program (WASP). WASP7 has been developed to aid modelers in the implementation of WASP. WASP7 has features including a pre-processor, a rapid data processor, and a graphical post-processor that enable the modeler to run WASP more quickly and easily and evaluate model results both numerically and graphically. With WASP7, model execution can be performed up to ten times faster than the previous USEPA DOS version of WASP. Nonetheless, WASP7 uses the same algorithms to solve water quality problems as those used in the DOS version of WASP.

WASP7 is used routinely throughout the United States in the development TMDLs and waste load allocations. The model contains algorithms for conducting: 1) Eutrophication/Conventional Pollutants, 2) Organic Chemicals/Simple Metals, 3) Mercury, 4) Temperature, Fecal Coliforms, Conservative Pollutants.

WASP7 contains 1) a user-friendly Windows-based interface, 2) a pre-processor to assist modelers in the processing of data into a format that can be used in WASP, 3) high-speed WASP eutrophication and organic chemical model processors, and 4) a graphical post-processor for the viewing of WASP results and comparison to observed field data.

Dates, Locations, and Logistics

Updated information about these workshops can be found at the Watershed and Water Quality Modeling Technical Support Center webpage (www.epa.gov/athens/wwqtsc). These training sessions will be free and offered at different localities across the United States. We are planning on having approximately 50 people in a class. Participants attending a WASP training course will be required to have a laptop computer or share a computer with someone. The laptop computer will be used for running the model and viewing the course materials. Each participant will be required to download the model and course material prior to attending the workshop. If you are interested in attending one of these workshops please contact Tim Wool at wool.tim@epa.gov or the course coordinator listed in the table.

Dates	Location
August 25, 2007 - August 29, 2007	EPA Region 4 Atlanta Federal Center 61 Forsyth St. SW Atlanta, GA

Instructors:

Tim Wool – is with US EPA Region 4/TMDL Program and is the Director of the Watershed and Water Quality Technical Support Center. Tim has over 20 years experience in the development and application of WASP. Tim routinely uses WASP for the development of TMDLs.

Robert Ambrose – is with EPA ORD-NERL/ERD-Athens in the Processes and Modeling Branch. Bob has over 24 years experience in the development and application of WASP.

Chris Knightes-- is with EPA ORD-NERL/ERD-Athens in the Regulatory Support Branch since 2002. While at the EPA, Chris has focused on modeling mercury processes and chemistry using WASP and R-MCM, and has developed SERAFM risk-screening level model for mercury cycling steady-state process model for ponds and lakes. Chris has 12 years of experience with environmental contaminant transport and fate modeling.

How to Register

If you are interested in attending one of these workshops please send e-mail to Tim Wool (wool.tim@epa.gov). There is no charge for the workshop; attendees are responsible for their travel and lodging. A list of local hotels will be e-mailed to you once you register.

Information for Atlanta WASP Course

The WASP Course will be held at the Atlanta Federal Center (EPA Region 4) for information about hotels and travel arrangements visit their webpage at:

http://www.epa.gov/region4/about/visitors.html

Agenda (Subject to Change)

Monday – Registration/Introduction to Hydrodynamics EFDC

- 12:00 – 1:00
  - Course Registration
- 1:00 – 3:00
  - Introduction to Hydrodynamics
  - Hydraulics/Hydrodynamics in Streams & Rivers
  - Hydrodynamics in Estuaries
- 3:00 – 3:15

    - Break
- 3:15 – 5:00
    - Data Requirements
    - Illustrative Examples
        - One Dimensional
        - Two Dimensional
        - Three Dimensional
    - Issues Linking Hydrodynamic Models with WASP

Tuesday -- Introduction to WASP

- 8:30 – 10:00
    - Introduction to Modeling with WASP
    - Model Segmentation
    - Loads and Boundaries
- 10:00 – 10:15
    - Break
- 10:15-12:00
    - Advection
    - Dispersion
    - Sediment/Particulate Transport
- 12:00 – 1:15
    - Lunch
- 1:15 – 5:00
    - Overview of the WASP7 Modeling Environment
    - Development of a Conventional Pollutant Riverine TMDL
        - Model Segmentation
        - Flow Determination
        - Water Quality Boundary Conditions

Wednesday – Eutrophication

- 8:30 – 10:00
    - Introduction to Eutrophication
    - DO-BOD Interactions
- 10:00 – 10:15
    - Break
- 10:15 – 12:00
    - Algal Growth Kinetics
    - Eutrophication & Complex Nutrient Cycling
- 12:00 – 1:15
    - Lunch
- 1:15 – 5:00
    - Continued Hands-On TMDL Development
        - Dissolved Oxygen
        - Nutrient Enrichment
        - Others?

Thursday – Toxicants

- 8:30 – 10:00
  - Introduction to Toxicants
  - Sorption
  - Photolysis
  - Volatilization
- 10:00 – 10:15
  - Break
- 10:15-12:00
  - Biodegradation
  - Ionization
  - Hydrolysis
  - Reaction Products
  - Issues Relating to Bioaccumulation
- 12:00 – 1:15
  - Lunch
- 1:15 – 5:00
  - Illustrative Examples
    - Mercury Cycling
    - Ammonia Toxicity
  - Hands-on Experience

Friday – TMDL Development

- 8:30 – 12:00
  - Continued Hands-On TMDL Development
  - Site Specific Application Questions for using WASP in TMDL Development
    - Participants are invited to bring data to develop WASP input datasets.